

LIST OF INVITED CONFERENCE PARTICIPANTS

- * Col. Robert M. Behr (NSC)
- * Lloyd Belt (DIA)
- * Davis B. Bobrow (ARPA)
- * Richard A. Brody (Stanford)
- * Richard Cady (Bendix)
- C. William Fischer (BoB)
- * George H. Fiske (DIA)
- Robert A. Frosch (OASN)
- * Harold Guetzkow (Northwestern)
- * Morton Halperin (Brookings)
- * Charles M. Herzfeld (IT&T)
- * John Huizenga (CIA)
- * Kenneth T. Johnson (DIA)
- * William W. Kaufman (Brookings)
- * Stephen J. Lukasik (ARPA)
- William A. Morrill (BoB)
- * Max Oldham (CIA)
- * Claus Ruser (State)
- Thomas C. Schelling (Harvard)
- Donald H. Steininger (OST)
- * Raymond Tanter (Michigan)
- * Maj. Gen. J. E. Thomas, USAF (ret) (CIA)
- * Seymour Weiss (State)
- * Albert J. Wohlstetter (Chicago)

* indicated acceptance 9/29/69

LIST OF RAND PARTICIPANTS

Bruno Augenstein
Bob Belzer
Claude Culp
Hans Heymann
Steve Hosmer
Fred Ikle
Bob Komer
Sam Koslov
Bill McMillan
Richard Moorsteen
Harry Rowen
Paul Tamarkin
Al Williams
Charlie Wolf

TENTATIVE AGENDA

OCTOBER 9:
(9-5:00)

User-Producer Issues

- A. The relationship (communication)
 - how does the user perceive the producer and his product?
 - how does the producer perceive the user's needs?
 - how do they communicate and interact?
- B. The product (intelligence)
 - what is it, in terms of form, content and use?
 - how good is it, in terms of accuracy, relevance, credibility?
 - how to measure and allocate its costs?
- C. The target (security decisions)
 - what kinds of decisions?
 - what forms of intelligence?
 - how does intelligence affect decisions?
 - how modify intelligence to improve decisions?

OCTOBER 10:
(9-5:00)

- D. Analytic tools
 - formalized decision structures
 - uses of gaming
 - manual or computer simulations
 - Delphi applications
 - effects of information technology
 - explicit treatment of uncertainty
- E. The Collection Side of Intelligence
 - generating and revising "requirements"
 - appraising collection alternatives
 - assessing the value of redundancy

OCTOBER 11 AM:
(9-12:00)

- Possible rump session for participants holding special clearances
- how would inclusion of SI affect Conference conclusions?
 - beyond formal clearances, what problems of access and sensitivity would arise?

SUMMARY REPORT ON THE
JUNE 18th INTELLIGENCE/SECURITY CONFERENCE

Hans Heymann, Jr.
Albert P. Williams, Jr.

RESULTS OF INFORMAL RAND CONFERENCE ON
INTELLIGENCE NEEDS FOR NATIONAL SECURITY DECISIONMAKING

A one-day Conference was held at RAND-Santa Monica on June 18, 1969, to discuss possibilities for research on the problems of the intelligence community in serving the national security decision process. (Agenda and List of Participants are appended as Attachments 1 and 2.) The Conference was held at the request of the Advanced Research Projects Agency (ARPA) and the Defense Intelligence Agency (DIA) in order to explore areas of potential external research that might assist DIA to allocate its resources more efficiently at a time when budgets are increasingly constrained. The results of the Conference and some extension of comments by several participants are summarized below.

PROBLEMS FACING THE INTELLIGENCE COMMUNITY

The Conference highlighted a number of serious problems facing the intelligence community:

- o Intelligence is coming under closer scrutiny by its Congressional, Administration, and public critics;
- o The cost of the intelligence effort is rising at a time when there is considerable pressure to divert funds from the national security budget to domestic programs;
- o The community is beset by rising demands for its product from consumers who view the product essentially as a free good; and,
- o External requests for intelligence add new requirements to a collection system that has no systematic way of disposing of obsolete or irrelevant ones.

There was general acknowledgment that these problems could benefit from a major analytic effort; that there are a number of problem areas that offer fruitful and feasible subjects for external research; and that a variety of research approaches and techniques exist that could profitably be applied.

AREAS FOR POTENTIAL ARPA-SPONSORED RESEARCH

The numerous research possibilities surfaced by the Conference seem to fall into three categories: (a) user-producer issues; (b) problems internal to the intelligence community; and (c) development of new analytic tools and methods.

A. RESEARCH AIMED AT USER-PRODUCER ISSUES

The term "user" here refers to top level policymakers (the President, the NSC, certain Cabinet members, Ambassadors, and the JCS). The term "producer" refers to the DIA, the Service intelligence arms, the CIA, and the NSA (which though largely a collection agency also produces "finished" intelligence), the State Department's INR, and other agencies of the community. The processes by which users convey their intelligence needs to producers, and by which producers seek to satisfy these user needs constitute a complex set of interactions that significantly affect the national security decision process. A substantial number of potential research topics were suggested that require neither the development of novel or particularly sophisticated techniques, nor the kind of access that it might be painful for the intelligence community to grant.

(1) An examination of the user-producer relationship. Among the issues which may be addressed here are:

- o how do users and producers communicate with each other, both formally and informally; how does the quality of communication hinge upon personal contacts; and what subjects and degrees of interaction does each consider off-limits?
- o how are users' intelligence requirements generated, and how does the producer evaluate and respond to these requirements? Are there alternative ways of (a) generating and (b) evaluating these requirements? Can a system of "shadow prices" or some other quasi-market mechanism be of use in this process?
- o to what extent are major user needs and interests actually reflected in existing intelligence collection and production priorities?
- o what affects the users' perception of the utility and credibility of intelligence?

- o to what extent are intelligence analysts hampered by a lack of feedback from the user and a lack of adequate content concerning the actual policy alternatives facing the decisionmaker?

(2) An analytic ordering and costing of the intelligence product. While the community itself is mounting a substantial effort in this area, and while research in depth would require some special clearances and close cooperation from intelligence agencies, the research community could clearly make a useful contribution here and the access problems are not such as to be insurmountable. The following are among the more interesting questions:

- o what is the intelligence end product in terms of form, content, use, and value?
- o what has been the record of the accuracy and impact of intelligence estimates? (Here case studies of particular kinds of end products, such as SNIES or intelligence support for contingency plans, or indeed of particular individual estimates on some given policy issues, might be useful.)
- o are there ways in which it would be useful to allocate the costs of end products?
- o is it possible to construct a comprehensive program budget that will display product cost in a way that will enable the user to measure cost against some subjective notion of utility and thus constrain users from treating products as free goods?
- o what are some good conceptual solutions to the problems of joint costs and joint products?

(3) Role of intelligence in systematic policy analysis.

- o to what extent is the policymaker's analysis now determined by the form and time frame in which he receives intelligence? to what extent is the user made aware of the evidence and methodology underlying the estimate he receives from the community? is he knowledgeable of the strengths and weaknesses of the intelligence product?
- o is the producer aware of the particular information inputs needed for policy analysis, and do policy makers themselves understand these needs?

- o how receptive are users and producers of intelligence to a far greater emphasis on making uncertainty in estimates explicit, such as by treating in detail alternative outcomes, alternative environments, and so forth?

B. RESEARCH ON PROBLEMS LARGELY INTERNAL TO THE INTELLIGENCE COMMUNITY

Although the Conference skirted sensitive problems within the intelligence community, it was clear that research in this area would encounter much greater obstacles than in the areas described above (vested agency interests, the need for high-level clearances, and so forth). It was equally clear, however, that some of the largest potential payoffs for research lie in this sphere. Some of the more interesting questions are:

- o what are efficient ways of translating users' requirements into the formulation of specific collection needs and the means of satisfying them?
- o how are specific collection requirements generated, modified, and deleted?
- o is there any measurable correlation between the costs of collection systems and the intelligence benefits they yield?
- o what value should be attached to redundantly collected intelligence that only serves to confirm analytic estimates?
- o is it possible to identify least-cost combinations of collection methods applicable for meeting specific requirements?
- o how can scientific methods be usefully applied in the development of new collection technology? what institutional arrangements would be conducive to improved results?
- o what are the relationships between the intelligence analysts producing estimates and the collection agencies providing the raw data?
- o how well are the analytical methods employed by intelligence analysts suited on the one hand to the evidence which they have available and on the other hand to the requirements of the policymakers using the products?

C. RESEARCH AIMED AT DEVELOPING ANALYTIC TOOLS

Considerable interest was expressed in the application of more highly sophisticated techniques and the adaptation of some existing research approaches to the problems of the intelligence and decision-making communities. Examples are:

- o Formalized decision structures: decision theory, tests, applications.-- Some recent applications of formal decision theory to practical decision questions are shedding light on the components of evaluating information. Although techniques are still in an early stage of development and applications to intelligence problems so far have been minimal, several conference participants argued that some recent theoretical developments offered good prospects for practical payoffs to intelligence in the longer run.
- o The uses of gaming for government decisions. -- Experience with simulation-type games (war games, political games) suggests that the technique may be helpful in revealing the "value" of intelligence through game iterations with different forms and different levels of information.
- o Computer simulation of conflict.--Work in this area is still at an early stage of development, and the models involved are as yet crude, but the technique may provide applicable results in the more distant future.
- o Delphi techniques.--This methodology offers an iterative mechanism for refining estimates by a number of experts and clarifying the points of difference; the technique has obvious intelligence applications.
- o The introduction of uncertainty into computer models of strategic force exchange.--Some preliminary work done on the explicit introduction of multiple factors of uncertainty (upwards of 200) into computer models suggests that it may be practical to use expert opinion on degrees of uncertainty in order to arrive at force costs for different levels of confidence regarding so-called "assured destruction." Considerably more refinement is needed, but the application to valuing intelligence which explicitly reduces some elements of uncertainty is obvious.

SOME APPROPRIATE NEXT STEPS

The Conference focused primarily on ARPA's first interest, i.e., to explore the desirability and feasibility of research in the intelligence area. The discussion of possible future steps to develop a program was relatively brief. In reviewing this discussion, three approaches to developing a longer run research program suggest themselves as being appropriate, respectively, to the three categories of research listed in the preceding section.

1. RESEARCH FEASIBILITY SURVEY

The projects listed under A in the preceding section constitute a set of relatively straightforward, relevant research ideas, that would not require highly sophisticated or untried methodologies, but that would require a survey of accessible data and of prior analytic work done within the community, as well as an exploration of interest and willingness to cooperate. Thus a useful first step would be to undertake such a survey by a small team over a relatively short period of time, say three to six months. In addition to its examination of data, the team would interview both users and producers of intelligence in order to add a sharper focus to the research topics and perhaps to uncover additional topics.

2. EXPLORATORY DELIBERATIONS

The projects listed under B in the preceding section would involve extensive research within the intelligence community. Such research would require not only a high level of access to sensitive materials, but also a high measure of cooperation within that community. Whether such access and cooperation can in fact be accorded to "outsiders" is a matter for careful exploration within the Government. The outsider's contribution to this exploratory process would necessarily be limited. It might take the form of discreet personal consulting on clarification of matters of research substance by individuals with extensive prior experience in intelligence matters.

3. NEW METHODOLOGIES SURVEY

The projects listed under C in the preceding section represent a set of research approaches which appear promising for practical pay-offs in the longer run. Since many of these approaches involve

application of sophisticated research techniques or adaptation of ongoing research activities to intelligence problems, they require further clarification. One useful approach to such clarification might be a carefully planned conference with commissioned papers to provide a forum for a critical examination of these potential techniques. The conference could serve to sharpen substantially the focus of these techniques and explore their applicability prior to submission of formal research proposals. Alternatively, the possibilities in this area might be explored by a small group, as suggested in (1) above.

INTELLIGENCE/SECURITY CONFERENCE

June 18, 1969

AGENDA (Potential Research Areas)

- (1) What is the intelligence community? How does it differ from the larger universe of information and research producers? How is it organized institutionally, functionally and organically? What is DIA's place in it? Is DIA an integral element of a cohesive entity, or does it in fact have a distinctly separate identity? An analytic description of the community may be a prerequisite to a real understanding of its interactions.
- (2) How do decisionmakers view the intelligence community? How much confidence and reliance do they place in it? To what extent and in what manner do they communicate with it? Are decisionmakers in fact able or willing to articulate their intelligence needs? Is their judgment of the quality of the intelligence product influenced by the nature of the relationship as well as by the nature of the product? Is the arm's length relationship inevitable?
- (3) What constitutes the external product of the intelligence community? How can one usefully catalogue the variety of intelligence outputs -- by form (e.g., NIE's, OB's, surveys, field reports, special-purpose briefings); by content (e.g., enemy weapons capabilities, force deployments, warning indicators, estimates of enemy intent, assessments of political developments in friendly countries); by use (e.g., to guide contingency planning, weapons decisions, foreign policy choices, force dispositions; to add to the stock of background information; to provide copy for classified newssheets). What determines the allocation of intelligence resources to these various products? Since, to the user, the intelligence product appears to be a free good, what reasons does he have to limit his demands? In order to begin to assess the utility of various elements of the intelligence product to decisionmakers, an extensive catalogue effort would be essential.
- (4) How well does the intelligence product meet the needs of the policy-making community? Does the intelligence community have a clear notion of these needs? Do policymakers? For example, both seem to grope for predictions about the unpredictable, when instead both would be better served by making uncertainty explicit and, where possible, by assessing the range, probabilities, and implications of alternative outcomes. To what extent is the nature of the product determined by the momentum of the intelligence producing mechanism rather than by the needs of the consumer?

(5) How are collection requirements generated? Are the changing intelligence needs of policymakers translated into clear signals to the collection effort or are they attenuated in the process of production and coordination? Do collection systems generate their own requirements? Do anachronistic contingency planning habits burden the system with unrealistic requirements? Are collection requirements systematically reviewed to weed out archaic and redundant "user needs"?

(6) What promising analytic techniques and ongoing research approaches might be helpful in the study of the above questions or otherwise of interest?

INTELLIGENCE/SECURITY CONFERENCE

18 June 1969

LIST OF PARTICIPANTS

Co-Chairmen: Hans Heymann, Jr. and Albert P. Williams, Jr.
Rapporteur: Valentina Laffin

Lloyd K. Belt (DIA)
Thomas A. Brown (Math--on assignment
to Department of State)
Edmund Brunner, Jr. (Economics)
Fred Cone (Economics)
Merton E. Davies (Engineering)
Robert A. DiPaola (Math)
Dan Ellsberg (Economics)
Don E. Emerson (Systems Sciences)
Allen S. Ginsberg (Mgt. Sciences)
Timothy Hallinan (Cost)
Paul Y. Hammond (Social Science)

Stephen T. Hosmer (Social Science--
Washington Office)
Fred C. Ikle (Social Science)
William Jones (Economics)
Samuel Koslov (Research Council)
Roger E. Levien (System Sciences)
Joseph E. Loftus (Economics)
Tracy Rumford (Computer Sciences)
Gerald H. Shure (SDC/UCLA)
Raymond Tanter (Univ. of Michigan)
Charles Wolf, Jr. (Economics)
Jack Zlotnick (CIA)